LDRD Program: the Plan

Sensor studies (HV/HR-CMOS and LGAD strutures)	Sensor Characterization in labs	CariBou Readout	Testbeam activities
Device simulations (SILVACO, Synopsis Sentaurus, weightfield, COMSOL?)	Lab setup	Development of the CariBou readout architecture for CMOS Pixel desmonstrator testbeam	CMOS Pixel demonstrator TB (spring/ summer 2016)
Technology survey (e.g. HV CMOS structures from different foundries) ***[organizing a meeting @ BNL with a few key players, e.g. I. Peric and M. Benoit in the spring]***	Basic Sample measurements (I-V scans, capacitance measurements etc…)	Adapt it to lab measurements here at BNL	Shifts/Analysis/ Deployment of MIMOSA based to improve telescope performance (collab. with U. Geneve)
Should we explore SiGe based sensors (or only readout devices?)	Charge injection (through laser) measurements	Deployment in Testbeam (and FELIX architecture benchmark)	HGTD-LGAD testbeam end of the year? (what can be our contribution?)
Participation in RD50 (e.g. for LGAD R&D which is relevant for the HGTD in ATLAS) ***[Meeting w. A. Seiden - Jan 20th for HGTD]***	Irradiation and characterization: TCT scans/ DLTS (Instrumentation?)		
Applications beyond HEP (e.g. medical)?			

During/Post-meeting notes: interests of people

Sensor studies (HV/HR-CMOS and LGAD strutures)	Sensor Characterization in labs	CariBou Readout	Testbeam activities
Gabriele, Wei: 20% each		Hucheng, Hongbin	Lailin, Eleni, Francesco (HV-CMOS: ~10%)
Alessandro, Francesco: ~15-20%		Kai (for the FELIX board)	
	Gerrit: 10%		Francesco LGAD (5%). Others?
	David (advising role)		
Relying on Stefania (need to talk to her) for 30% max. as main player in measurement			

During/Post-meeting notes: interests of people

Sensor studies (HV/HR-CMOS and LGAD strutures)	Sensor Characterization in labs
HV-CMOS: collaborate with Geneva, Heidelberg, Liverpool to study pixel applications based on CMOS sensors, in particular for irradiation characterization and device modeling.	
LGAD: similarly develop collaboration within RD50 with UCSC (Abid/Harmudt) and INFN-Torin (Niccolo') to characterize and simulate existing design and sensors (as well as new ones. see below)	
LGAD: more importantly, use the possibility of quick feedback cycle design/fabrication to test innovative designs developed in house (in particular addressing radiation resistance issues) and fab'ed through our facility in Instrumentation. Eventually transfer technologies for productions in foundries	
Lab setup: create infrastructure and expertise in lab for advanced Silicon detectors for future application. And make resources available on the long terms as general facility (for example on the long term the edge TCT-scan system can be considered as a facility at use of and for the Instrumentation Division)	